

R.F Exposure/Safety Calculation for 1200-G-PCS-AO

The E.U.T. is rack or wall mounted. The typical distance between the E.U.T. and the general population is >50 cm.

Calculation of Maximum Permissible Exposure (MPE) Based on Section 1.1307(b)(1) Requirements

FCC limit at 1960 MHz is: $1 \frac{mW}{cm^2}$

Using table 1 of Section 1.1307(b)(1) limit for general population/uncontrolled exposures, the above level is an average over 30 minutes.

(a) The power density produced by the E.U.T. is

$$S = \frac{P_t G_t}{4\pi R^2}$$

P_t- Transmitted Peak Power (worst case)

G_T- Antenna Gain, 12.5 dBi = 17.8 numeric

R- Distance from Transmitter 50cm

(b) Peak power density at worst case continuous transmission:

Band	Modulation	Pt (mW)	Antenna type	G _T (dBi)	G _T numeric	R (cm)	S _{AV} (mW/cm ²)	Spec (mW/cm ²)
PCS	QPSK	297	External	12.5	17.8	50	0.168278	1
	16QAM	275	External	12.5	17.8	50	0.155813	1
	64QAM	382	External	12.5	17.8	50	0.216438	1

(c) This is below the FCC limit.